IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application:

1. (currently amended) A method for manufacturing a grating, comprising steps of:

a) providing a substrate;

b) forming a first insulating layer on said substrate;

c) forming a silicon oxide layer on said first insulating layer;

d) forming and hard baking under a ~~relatively low~~ temperature of 70°C to 90°C for 2 to 5 hours a photoresist on said silicon oxide layer for defining a plurality of specific zones;

e) etching said first insulating layer and said silicon oxide layer within said specific zones respectively for forming a plurality of concaves;

f) forming a second insulating layer on said silicon oxide layer, wherein said second insulating layer fills said concaves for forming a plurality of structural pillars therein;

g) defining a plurality of grating zones onto said second insulating layer;

h) forming an adhesive layer and a conductive layer on said grating zones in sequence, wherein said grating zones comprise said structural pillars;

i) removing parts of said second insulating layer located outside of said grating zones; and

j) removing said silicon oxide layer for exposing a plurality of grating structures within said grating zones.

2. (original) The method as claimed in claim 1, wherein said substrate is a silicon insulating substrate.

3. (original) The method as claimed in claim 1, wherein said first insulating layer and said second insulating layer both are silicon nitride layers formed by a low pressure chemical vapor deposition (LPCVD).

4. (original) The method as claimed in claim 3, wherein said first insulating layer has a thickness ranged from 2500 ~ 3000Å.

5. (original) The method as claimed in claim 1, wherein said step b) further comprises a step b1) of forming an electrode on said first insulating layer.

6. (previously amended) The method as claimed in claim 1, wherein said step c) is performed by a plasma enhanced chemical vapor deposition (PECVD).

7. (original) The method as claimed in claim 1, wherein said silicon oxide layer has a thickness ranged from 1.5 ~ 2 μm.

8. (cancelled)

9. (original) The method as claimed in claim 1, wherein said step e) is performed by a reactive ion etching (RIE).

10. (original) The method as claimed in claim 1, wherein said step h) is

10. (original) The method as claimed in claim 1, wherein said step h) is proceeded with an evaporation deposition rate of 0.1 ~ 0.2 Å/sec.

11. (original) The method as claimed in claim 1, wherein said adhesive layer comprises a metal material selected from a group consisting of a chromium (Cr), a titanium (Ti), and an alloy of titanium (Ti) and tungsten (W).

12. (original) The method as claimed in claim 1, wherein said adhesive layer has a thickness ranged from 150 ~ 200 Å.

13. (original) The method as claimed in claim 1, wherein said conductive layer is a gold layer.

14. (original) The method as claimed in claim 13, wherein said gold layer has a thickness ranged from 1500 ~ 2000 Å.

15. (original) The method as claimed in claim 1, wherein said step i) is performed by an RIE method.

16. (original) The method as claimed in claim 1, wherein said step j) is performed by a wet etching method using an etching solution.

17. (original) The method as claimed in claim 16, wherein said etching solution is a hydrofluoric acid (HF).

18. – 23. (cancelled)